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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,343	10/30/2003	Yukako Taka	03657/HG	5393

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT PAPER NUMBER

1774

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,343

Applicant(s)

TAKA ET AL.

Examiner

Betelhem Shewareged

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-27 is/are pending in the application.
- 4a) Of the above claim(s) 14-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response filed on 01/04/2006 has been fully considered. The 35 USC 102 and 35 USC 103 rejections have been withdrawn in view of Applicant's amendments and comments.
2. Claims 1 and 14 are amended, claims 3 and 4 are canceled, and claims 1, 2 and 5-27 are pending. (NOTE: Claims 14-27 are withdrawn from consideration as non-elected invention).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 5-8, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda et al. (US 6,562,441 B1) as evidenced by Shimadu et al. (US 2006/0046193 A1).

Maeda discloses an ink jet recording medium comprising a base material and a porous ink receiving layer on the base material (abstract). The ink receiving layer comprises particles having a particle diameter of not larger than 1 um (col. 6, line 24), hydrophilic binder crosslinked by irradiation of electron beam (col. 7, line 66 thru col. 8,

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line 64). The ratio of particles to binder is 1:1 to 100:1 (col. 4, line 35). The ink receiving layer further comprises additives such as cationic resins (col. 10, line 20). The cationic resins are equivalent to the claimed nitrogen containing compounds. PVA-420 is an example of the binder (Example 1), and the polymerization degree of the binder ranges between 300-2400, which is evidenced by Shimadu (see [0162] of Shimadu).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (US 6,562,441 B1) as evidenced by Shimadu et al. (US 2006/0046193 A1), as applied to claims 1, 2, 5-8, 12 and 13, above, in further view of Misuda et al. (US 4,879,166), Anderson et al. (US 6,096,469), and Held et al. (US 5,537,137).

7. Maeda does not disclose additive comprising a sulfur containing compound as recited in claim 9.

8. Misuda teaches a carrier medium for ink jet printing comprising a substrate and an ink absorbent layer (claim 1). The ink absorbent layer comprises thioether having a formula of R-S-R' (col. 3, line 57).

9. Maeda and Misuda are analogous art because they are from the same field of endeavor that is the ink jet recoding sheet art. At the time of the invention, it would

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have been obvious to a person of ordinary skill in the art to combine the thioether of Misuda with the invention of Maeda in order to prevent a color change of the printed image (col. 3, lines 47-55 of Misuda).

10. Maeda also discloses that inorganic salts may be used as ink fixing agents (col. 10, lines 20-41). But the reference does not disclose specific types of inorganic salts as recited in claim 10.

11. Anderson teaches an ink receptor media comprising a substrate and an ink receptor layer on the substrate (col. 4, line 20). The ink receptor layer comprises ink fixing agent such as inorganic multivalent metal salts having magnesium, zirconium or aluminum cation (col. 10, line 10).

12. Maeda and Anderson are analogous art because they are from the same field of endeavor that is the ink jet recoding sheet art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the inorganic multivalent metal salt of Anderson with the invention of Maeda in order to provide enhanced water resistance and dye fixing properties (col. 9, line 55).

13. Maeda does not disclose additive comprising a phenol containing compound as recited in claim 11.

14. Dungworth teaches an ink jet recording medium comprising a substrate and a coating layer (abstract). The coating layer comprises a polymer and hindered phenols [0115]. Maeda and Dungworth are analogous art because they are from the same field of endeavor that is the ink jet recoding medium art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the phenol

containing compound of Dungworth with the invention of Maeda in order to stabilize the polymer in the coating layer ([0113] of Dungworth).

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B.S.
March 12, 2006.


BETELHEM SHEWAREGED
PRIMARY EXAMINER